REMARKS

Claim 1 has been amended to recited that the transceiver and the receiver communicate wirelessly. Support for this limitation is found for example in Figure 1 which uses a typical graphic for representing wireless communication between the transceiver 102 and the receiver 200. Support for this limitation is also found for example at paragraph 40 which teaches transmission on frequency bands. A person reading the application as a whole would clearly understand that the transmission between the transceiver within the device and the remote receiver was wireless transmission.

Claim 1 has also been amended to recite that the plurality of sensors monitor multiple environmental conditions at regular intervals. Support for this limitation is found for example in paragraph at 45, which teaches that measurements are collected continuously at the collection rate.

Claim 4 has been amended to remove the word "threaded" from "threaded retaining means". Support for this limitation is found in paragraph 36, which teaches that the enclosure may include multiple parts that engage together to provide a watertight enclosure.

Claim 40 has been added. Claim 40 corresponds generally with previously withdrawn claims 26 and 27, but has been further amended to reflect some previous amendments to claim 1 which were made in response to previous Office Actions.

The Examiner has rejected claim 1 under 35 U.S.C. 102(b) as being anticipated by Tennes. U.S. Patent 4,745,564 issued to Tennes teaches a device by which accelerations experienced by consumer goods, such as fruit, are monitored. The device comprises electronics for measuring and storing accelerations if the acceleration of the device exceeds a threshold (column 2 lines 67-68; column 7 line 64 to column 8 line 7). Any such measured excessive acceleration is stored in memory 56 within the device (column 6 lines 47-51). The device includes a signal line 24 connected to an electronic jack 26, by means of which the data stored in the memory can be communicated to an external device, for further processing (column 4 lines 36-42).

The housing of the device completely encloses the electronics, and is made of casting resin so as to completely surround and embed the electronics (column 3 line 59 to

column 4 line 5). In this way the electronics, and in particular the 3-D accelerometer, will undergo substantially the same accelerations as the housing. Tennes teaches that the electronics can survive the temperatures necessary to melt the resin, so that the resin can be formed entirely around the electronics.

The electronics of the device are powered by a battery. The battery, like the other electronic components, is completely embedded within the resin. In order to replace a spent battery, the resin can be dissolved away from the electronics (column 4 lines 5-10). Alternatively, a rechargeable battery can used, and recharging accomplished by means of a lead from the electronic package to the exterior of the housing (column 9 lines 18-22).

The present invention differs from the device of Tennes in several ways. First, the present invention operates wirelessly, whereas the device of Tennes requires a physical connection for downloading the data stored in memory to an external device. Second, the present invention monitors environmental conditions continuously and derives environmental parameters continuously, while the device of Tennes only records accelerations if they are measured to be above a threshold. Third, the present invention uses a housing having two distinct enclosures, providing easy access to the electronics, whereas Tennes expressly uses a hardened resin housing which fully encases the electronics.

These differences will be made more clear by considering the elements of the claims.

The device of claim 1 includes a wireless radio transceiver for reporting the derived parameter values to a remote wireless receiver. This is an element not taught by Tennes. The Examiner has equated the transceiver 54 of Tennes with the transceiver of claim 1, and has equated the RAM/ROM 56 of Tennes with the remote receiver of claim 1. The Applicant respectfully submits that these elements are not equivalent. The RAM/ROM 56 can in no way be considered a remote receiver, and can only be considered even a receiver in the sense that it receives data from other electronic components. The RAM/ROM 56 does not meet the conventional meaning of "receiver", and in any event is not in any sense

"remote". This difference is important, because use of a transceiver and a remote receiver in the device of claim 1 allows the device to report collected environmental data wirelessly, which is not possible using the device taught by Tennes. Claim 1 has been amended to explicitly add that the transceiver and the receiver are wireless.

The device of claim 1 also includes a plurality of sensors for monitoring multiple environmental conditions at regular intervals. The Applicant respectfully submits that this element is not taught by Tennes. The processor of Tennes only derives data under certain conditions, namely when the acceleration as measured by the accelerometer exceeds a threshold. This difference is important, as continuous monitoring of all environmental data using the device of claim 1 allows for complete analysis of the environment through which the device passes during industrial processing, whereas the device of Tennes only records certain extreme events.

Since Tennes does not teach each and every element of claim 1 of the present application, the Applicant respectfully submits that claim 1 is not anticipated by Tennes.

The Examiner has rejected claim 3 and 6-8 under 35 U.S.C. 102(b) as being anticipated by Tennes. Claims 3 and 6-8 are dependent on claim 1 and include all of the limitations of claim 1. The Applicant therefore respectfully submits that claims 3 and 6-8 are not anticipated by Tennes.

The Examiner has rejected claim 4 under 35 U.S.C. 103(a) as being obvious in view of Tennes. Claim 4 is dependent on claim 1 and includes all of the limitations of claim 1. Furthermore, claim 4 includes the limitations that the enclosure includes two enclosure portions encasing the electronics, and that the enclosure includes retaining means providing sealed engagement between the two enclosure portions, enabling assembly and disassembly of the device. These are features not taught by Tennes.

The Examiner has stated that Figure 1 of Tennes illustrates two enclosure portions. The Applicant respectfully submits that Figure 1 does not show this. Figure 1 shows a single element 10 surrounding the electronics. Although Figure 1 depicts a horizontal line which appears to indicate two separate portions of the enclosure, this horizontal line merely indicates the y-axis of the frame of reference. Furthermore, column 3 line 61 to column 4

line 5 clearly indicates that the enclosure completely surrounds the electronics and is formed of a single cured piece of resin, and explains that this is desirable because it allows the electronics to experience the same accelerations as are experienced by the housing.

The Examiner has stated that Tennes indicates that the battery is replaceable, and that it would have been obvious to one skilled in the art to provide threaded means so as to allow replacement of the battery. However, Tennes teaches away from a housing which can be easily disassembled, having previously expressly stated that the use of a single all-enclosing cured resin as a housing is desirable, and then explaining how the battery can be replaced even though the electronics are housed in a single portion of resin (namely by melting the resin: column 4 lines 5-10).

These differences are important, as they allow the battery, or any electronic component, of the device of claim 4 to be replaced easily. In contrast, replacement of the battery of the device taught by Tennes requires melting or dissolving of the encasing resin, followed by reforming of the housing through curing of more resin.

Since the Examiner has not shown where Tennes teaches all the elements of claim 4, including those in claim 1 on which claim 4 is dependent, and because Tennes in fact teaches away from some of those elements, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 4.

The Examiner has rejected claim 5 under 35 U.S.C. 103(a) as being obvious in view of Tennes. Claim 5 is dependent on claim 1 and includes all of the limitations of claim 1. Furthermore, claim 5 includes the limitation that a plurality of printed circuit boards, which include some of the electronics, provides at least one of strength, structural integrity, and rigidity. This is an element not taught by Tennes. The Examiner has stated that usage of printed circuit boards for the electronics package would have been obvious to one of ordinary skill in the art since the electronics depicted in figs. 4A and 4B include the electronics as they would be mounted on a circuit board. However, this is not the complete limitation introduced in claim 5. While Tennes and the state of the art may suggest the use of printed circuit boards, Tennes in fact teaches away from the use of printed circuit boards to provide at least one of strength, structural integrity, and rigidity. Tennes achieves structural integrity by use of resin which completely surrounds and encloses the electronics

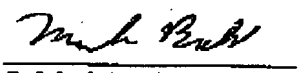
when forming the housing (column 3 line 61 to column 4 line 2). Rigidity, structural integrity, and strength are provided by the casting resin that is cast round the electronics package and sets. There is therefore absolutely no need in Tennes to use printed circuit boards for this purpose.

Since the Examiner has not shown where Tennes teaches all the elements of claim 5, including those in claim 1 on which claim 5 is dependent, and because Tennes in fact teaches away from some of those elements, the Applicant respectfully submits that a *prima facie* case of obviousness has not been established against claim 5.

The method of claim 40 the limitation of obtaining a plurality of measurement values at regular intervals. As discussed above with reference to claim 1, this is an element not taught by Tennes. The processor of Tennes only derives data under certain conditions, namely when the acceleration as measured by the accelerometer exceeds a threshold. This difference is important, as continuous monitoring of all environmental data using the method of claim 40 allows for complete analysis of the environment through which the device passes during industrial processing, whereas the device of Tennes only records certain extreme events.

In view of the foregoing, it is believed that the claims at present on file and as amended herein are in condition for allowance. Reconsideration and action to this end is respectfully requested.

Respectfully submitted,



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